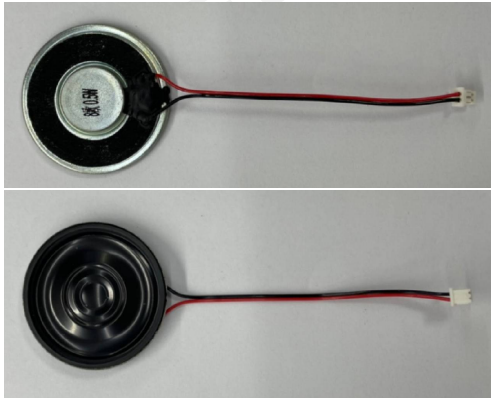


DYNAMIC SPEAKER

Product No. 139430

BMS36-12B-08H4.9W055

Issue no. BS/TES01.2050



Features:

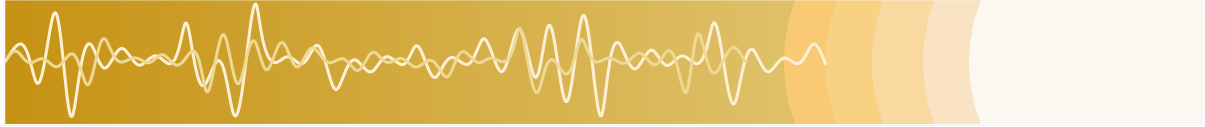
- Loud sound output
- RoHS

Drawn by	Checked by	Approved by	
Judy.Yang	Peter.Huang	Jason.Zhang	

BESTAR Holdings Co., Ltd.

www.be-star.com | info@be-star.com

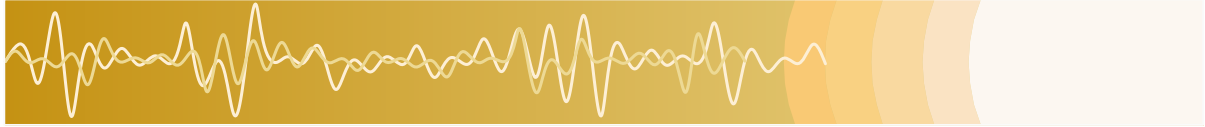




Content:

1 Characteristics	3
1.1 Technical terms	3
1.2 Test method	3
1.3 Frequency Response Curve	5
1.4 F0 Curve	6
1.5 Total Harmonic Distortion	7
1.6 R&B Curve	8
2 Dimension	9
3 Reliability Test	10
4 Packing	11
4.1 packing drawing	11
4.2 Packing quantity	11
5 History change record	12
6 Important Notice	13



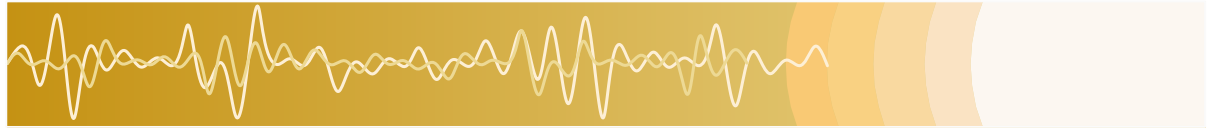


1.Characteristics

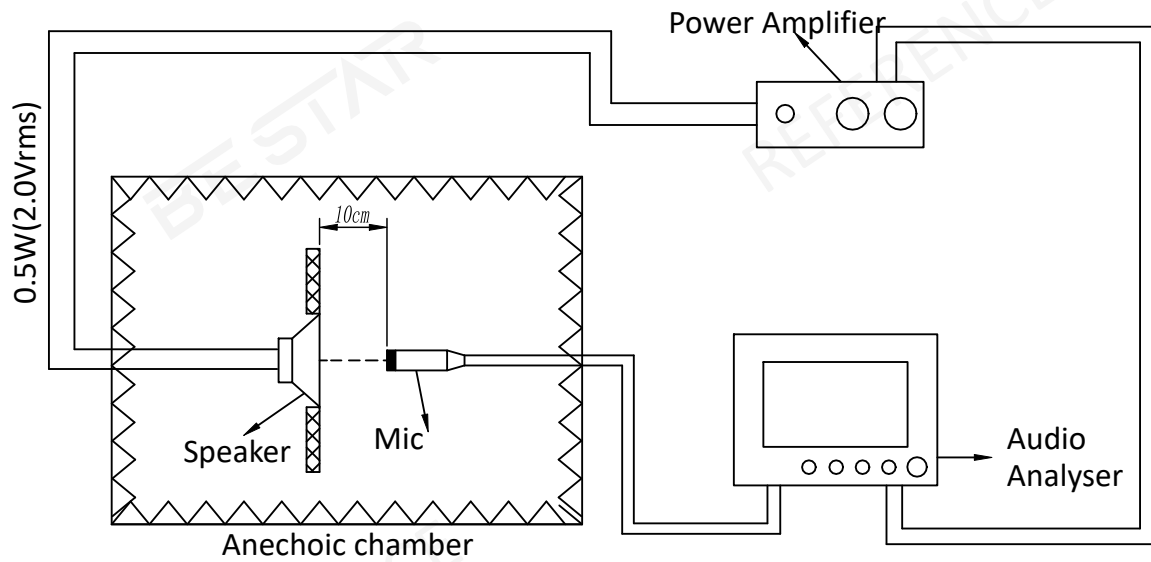
1.1Technical terms

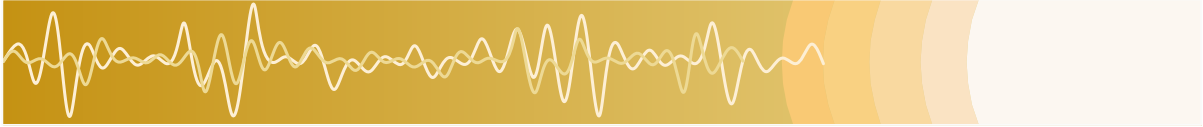
1. Size	$\phi 36*4.9\text{mm}$
2. Impedance at 2KHz	$8\pm 15\%\Omega$
3. Lowest Resonance frequency	$650\pm 20\%\text{Hz}$
4. Rated input power	0.5W (2.0V)
5. Maximum input power	1.0W (2.83V)
6. Buzz & Rattle(at sine wave 2.0V)	must be normal between 300-3400Hz
7. SPL	$96\pm 3\text{dB}$ (at 0.8K 1.0K 1.2K 1.5KHz in 0.5W/0.1m average (0dB SPL=20 μPa))
8. THD	$\leq 5\%$ (at 1kHz/0.5W/10cm)
9. Weight	$\approx 7.7\text{g}$
10. Operating temperature	$-30\ldots+70^{\circ}\text{C}$
11. Storage temperature	$-30\ldots+70^{\circ}\text{C}$





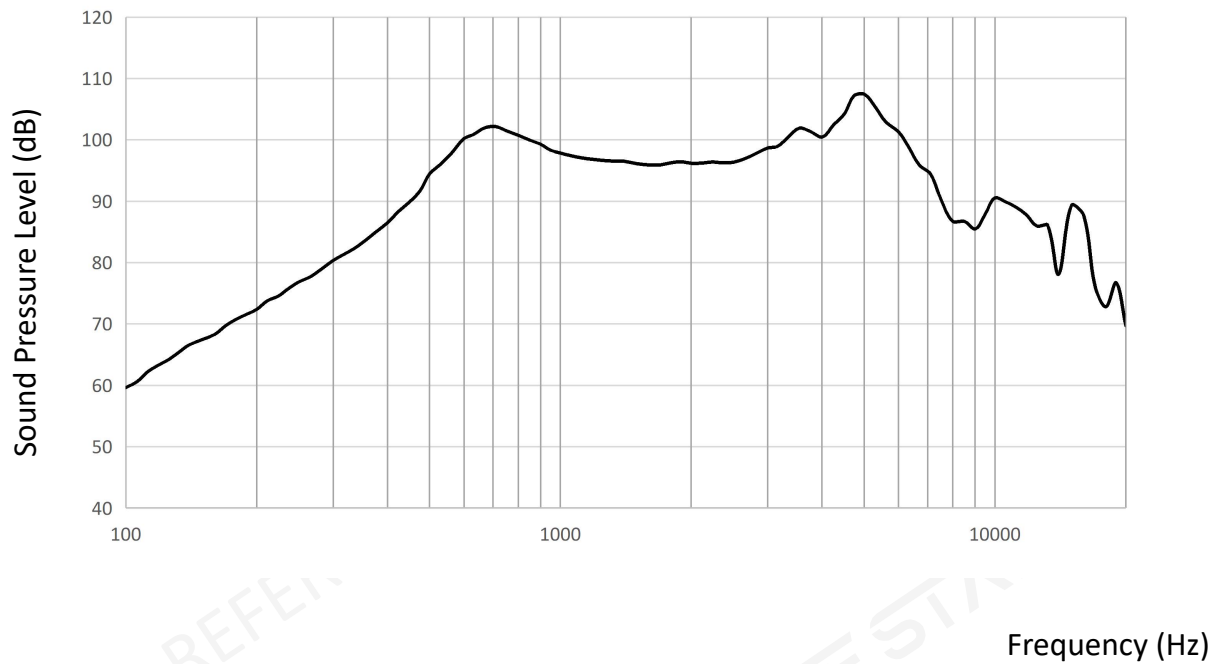
1.2 Test method:





1.3 Frequency Response Curve (only for reference)

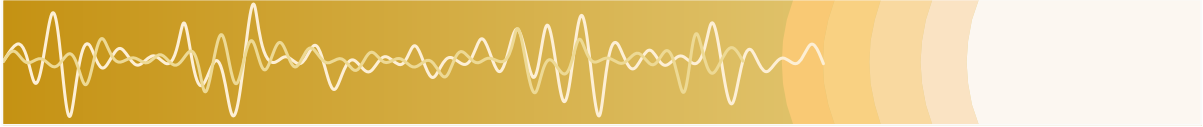
A: Frequency Response Magn 0 dB re 20.00 $\mu\text{Pa/V}$ 1/12Oct



1.3.1 Sensitivity

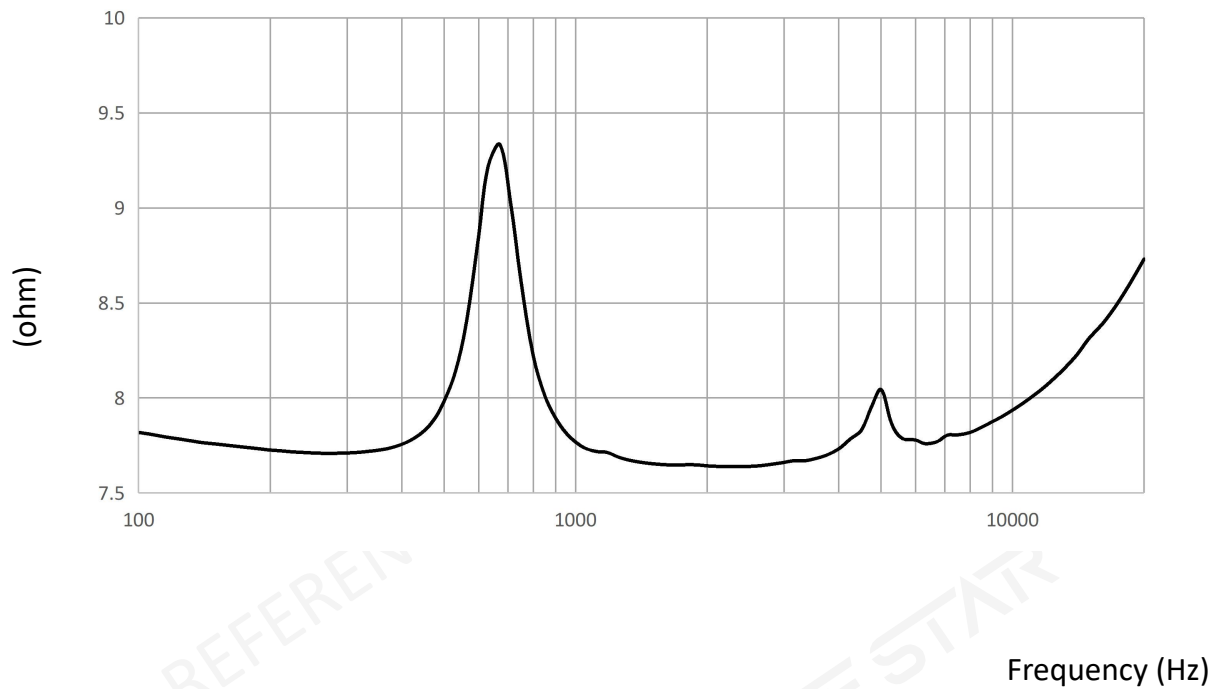
SPL is expressed in dB rel 20 μPa , computed according to IEC 268-5.
Measurement set up according chapter 1.2 and parameters according chapter 1.3





1.4 F0 Curve (only for reference)

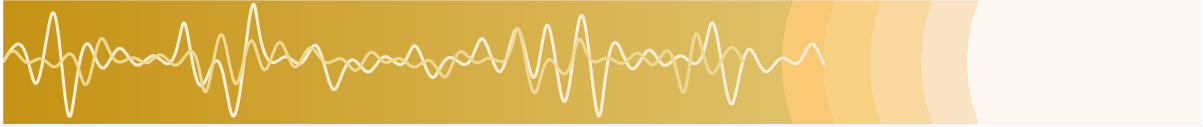
A: Frequency Response Magn 0 dB re 20.00 $\mu\text{Pa/V}$ 1/12Oct



1.4.1 Resonance Frequency

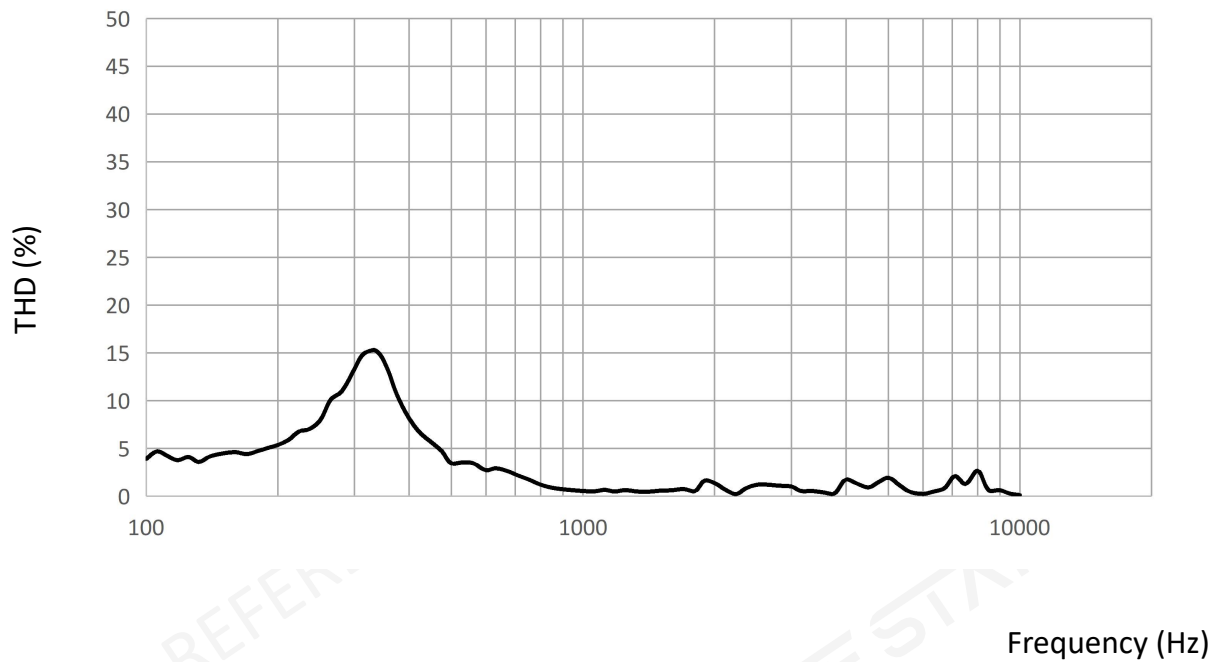
Resonance frequency is measured according test set up in chapter 1.2 and parameters according chapter 1.4





1.5 Total Harmonic Distortion (only for reference)

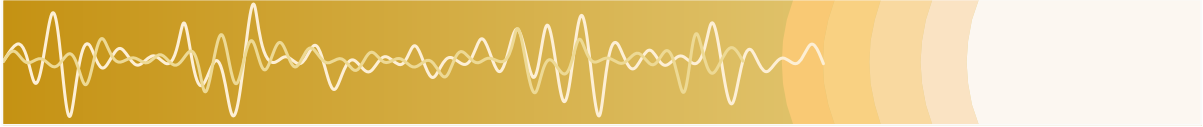
A: Frequency Response Magn 0 dB re 20.00 μ Pa/V 1/12Oct



1.5.1 THD

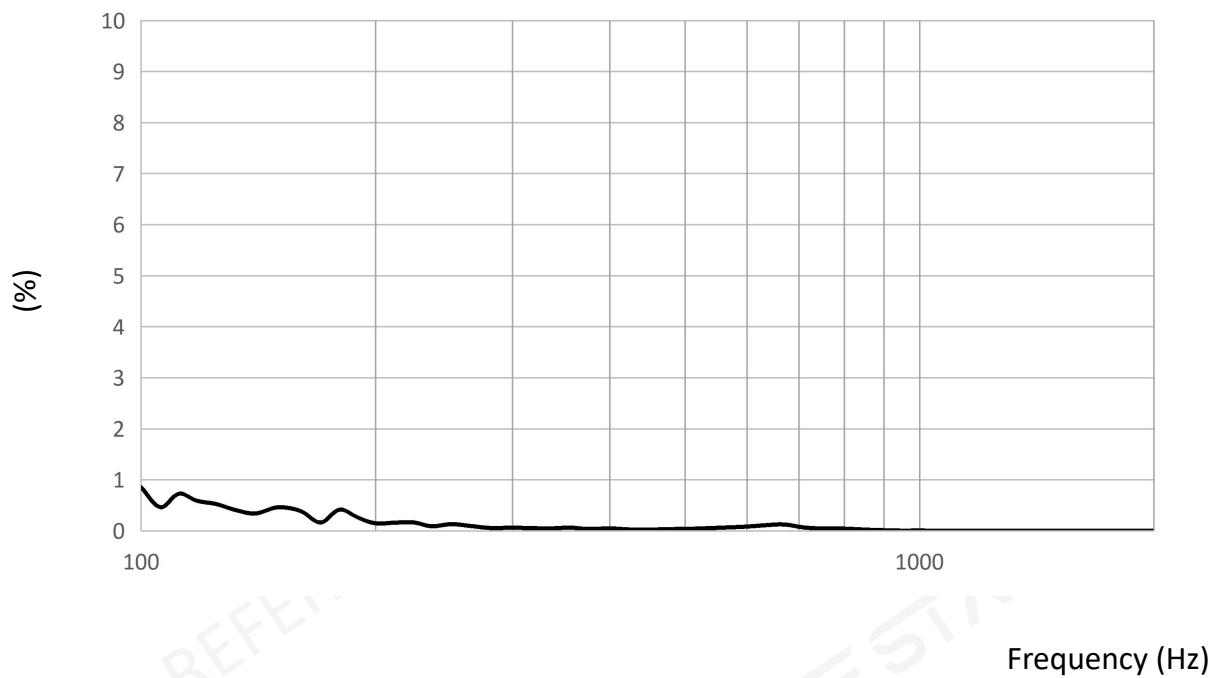
THD is measured according test set up in chapter 1.2 and parameters according chapter 1.5





1.6 R&B Curve (only for reference)

A: Frequency Response Magn 0 dB re 20.00 μ Pa/V 1/12Oct

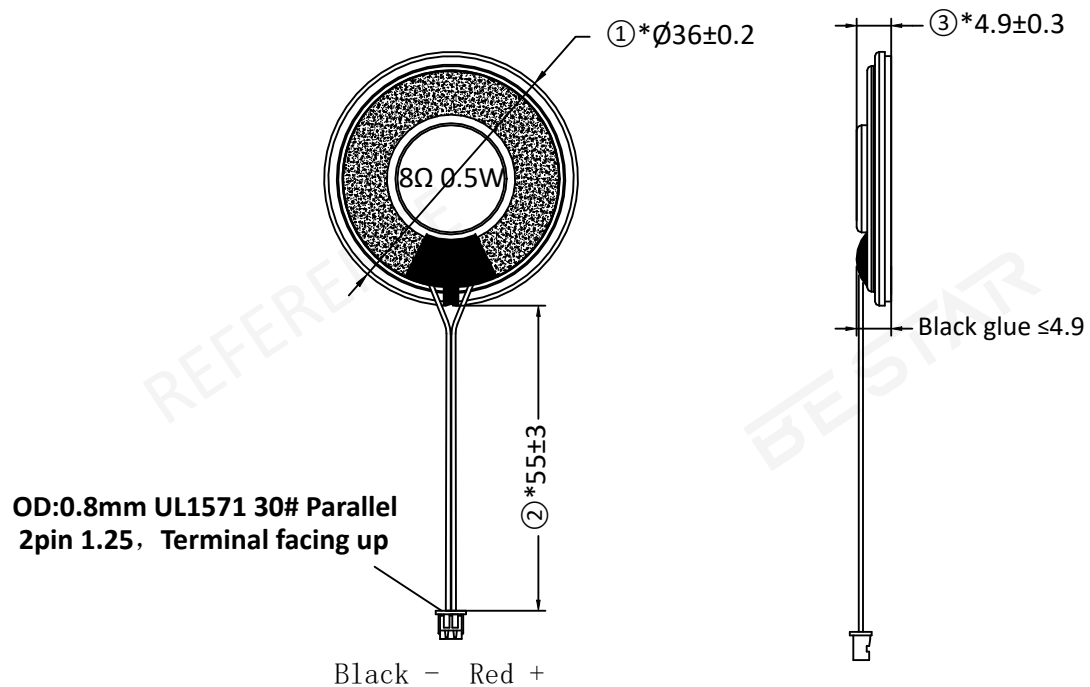


1.6.1 R&B

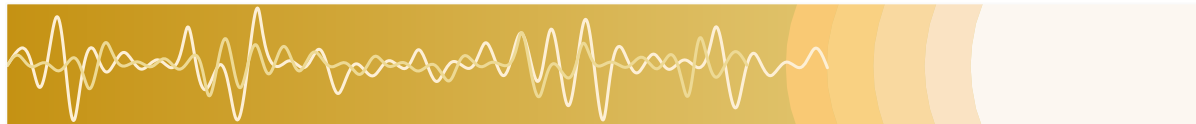
R&B is measured according test set up in chapter 1.2 and parameters according chapter 1.6



2. Dimension



Tolerance: $\pm 0.5\text{mm}$



3. Reliability test

3.1 High temperature preservation test

Temperature	+70 °C
Duration	96hrs

3.2 Low temperature preservation test

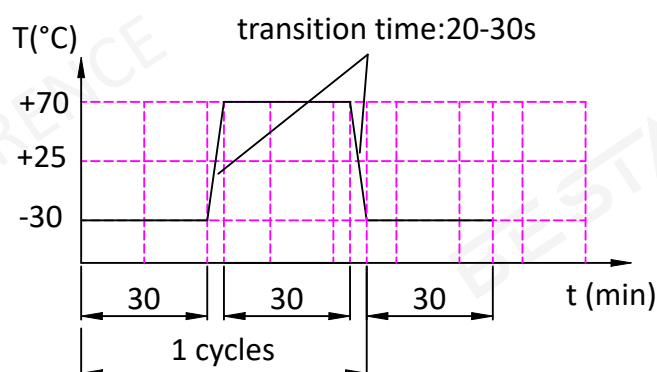
Temperature	-30 °C
Duration	96hrs

3.3 Humidity Test

Temperature	+40±3 °C
Relative Humidity	92%-95%RH
Duration	96hrs

3.4 Thermal Humidity Cycling

The part shall be subjected 5 cycles.



3.5 Short Term Maximum Power test

Test for 1 hour under maximum power. Input shall be white noise in rated frequency response. And the signal will be 1 second on, 59 seconds off, total 60 cycles.

3.6 Drop test

Drop the speaker contained in normal box onto the surface of 40mm thick board 10 times from the height of 75cm.

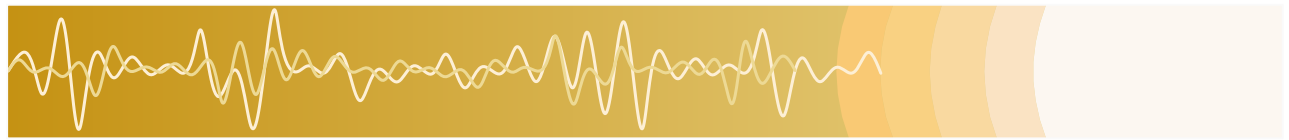
3.7 Operation Life Test

Must perform normal with program White-Noise source at Rated Power for 96 Hours.

3.8 Termination Strength

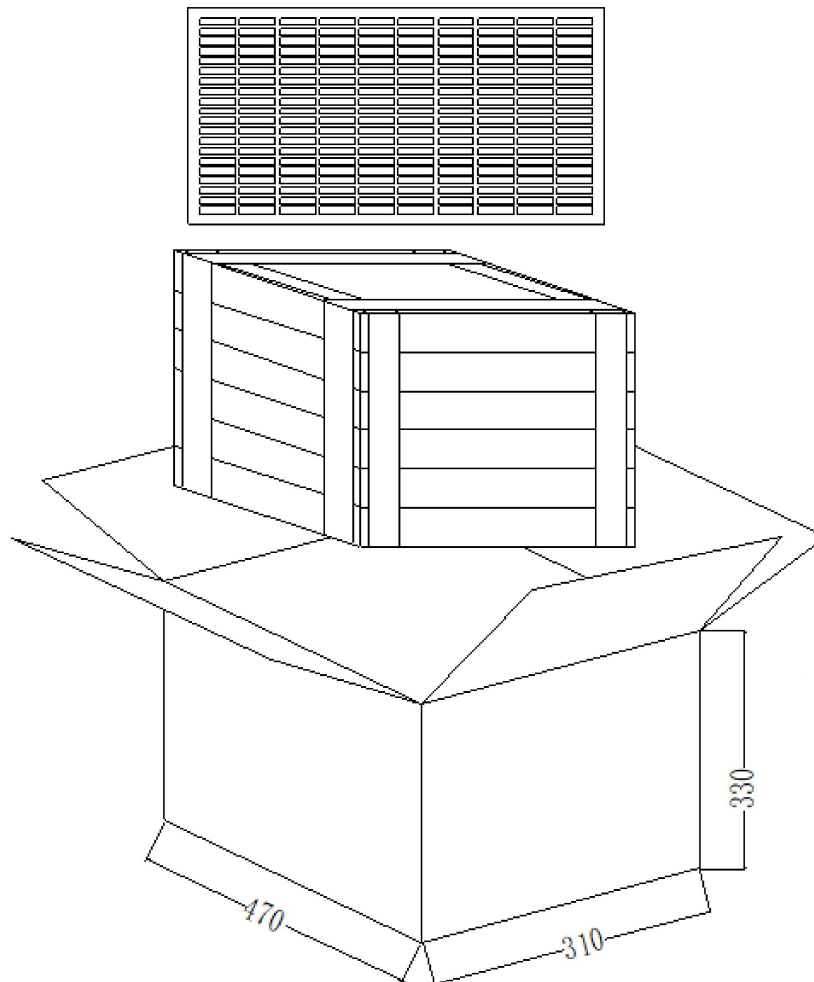
A static load of 5.0N shall be applied to the terminals for 10s in any direction between terminal block and frame and between terminal block and fasten terminal.





4. Packing

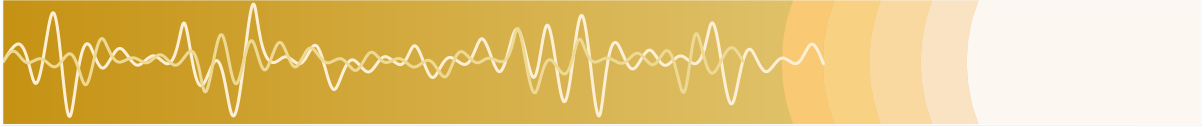
4.1 Packing drawing (unit:mm)



4.2 Packing quantity

- 1) 180pcs per tray
- 2) 4 trays per carton
- 3) 720pcs per carton
3. carton size: 470X310X330mm

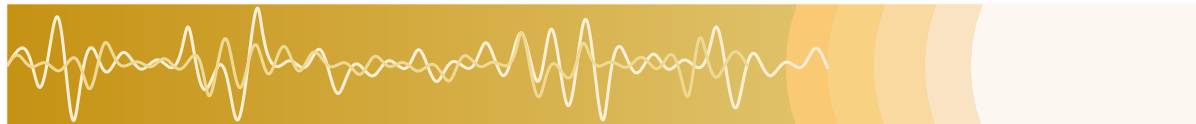




5. History change record

Version	Change Items	Date	Drawn	Checked	Approved
A0	First Edition	2021.10.11	Judy.Yang	Peter.Huang	Jason.Zhang





6. Important Notice

6.1 The products mustn't be washed

6.2 Storage Condition (Packaging)

The products should be stored in the room, where the temperature/humidity is stable. And avoid such places where there are large temperature changes. Please store the products at the following conditions:

Temperature: -10 to + 40 °C Humidity: 15 to 85% R.H.

6.3 Expire Date on Storage

Expire date (Shelf life) of the products is six months after delivered under the conditions of a sealed and an unopened package. Please use the products within six months after delivered.

If you store the products for a long time (more than six months), use carefully because the products may be degraded in the solderability and/or rusty. Please confirm solderability and characteristics for the products regularly.

6.4 Notice on Product Storage

(1) Please do not store the products in a chemical atmosphere (Acids, Alkali, Bases, Organic gas, Sulfides and so on), because the characteristics may be reduced at quality, and/or be degraded in the solderability due to the storage in a chemical atmosphere.

(2) Please use the products immediately after the package is opened, because the characteristics may be reduced at quality, and/or be degraded in the solderability due to storage under the poor condition.

6.5 Rated and Max input power

Rated input power

Rated input power is the maximum (limit) value which can be input to the component intentionally. If the actual input power to component keeps exceeding Rated Input power, it will damage the component acoustic performances and reliability. In the worst case, the component will get broken and no sound.

Max input power

Max input power is the maximum (limit) value for unexpected input power which is caused in the customer's circuit like surge voltage. If the actual input power to component keeps exceeding Maximum input power, it will break the component and cause no sound in a short time. Please note that component will have a risk to get broken if the unexpected input power continues.

The value of input power is set based on the sinusoidal power in the normal speaker use. If the special signal is input to component, the values of Rated and Max input power will be different. Please make a well-investigation at your laboratory in the case of the special signal input.

